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Followup to Lockheed groundwater monitoring discussion

Christy Brown to: moore.fredrick 06/13/2012 08:34 AM
Cc: Bernie Zavala, Carla Fisher
Bcc: Mary Queitzsch, Harry Craig, Mike Slater

Hi, Fredrick. I don't feel that I was particularly articulate about the reasons for my groundwater monitoring concerns yesterday. I'm going to try to summarize, please bear with me ...

Givens: Monitoring well 5S shows definite contamination, and has a hydraulic head substantially higher than the other wells in the area (6 feet higher is what sticks in my brain - that's a LOT of gradient over the 400 foot distance to the next well on the other side of the landfill.

The former unloading area was cleaned up by CERCLA many years ago. I would be surprised to see ongoing contamination in monitoring well 5S from that source, unless there's still source material present. If there is, we should think about what to do about that.

The waste storage pad underlying the landfill is sloped and designed to drain to the long north side (northwest edge) where monitoring well 5S is located.

Leachate production has slowed over time. This is a bit unexpected, as the landfill is not a min-tech unit.

Linda noticed precipitated materials at both RCRA and CERCLA landfills, and indicated that there have been problems with plugging.

So, if the leachate collection system at the RCRA landfill has gotten plugged -- not unexpected given the age of the unit (note I do not know whether there's been an ongoing maintenance program for this system) -- then it stands to reason that leachate is bypassing the system and flowing directly into the subsurface along the northwest edge of the unit.

This would explain both the very high hydraulic head and the ongoing contamination in monitoring well 5S.

If this is the reason for the high groundwater elevation in 5S, then groundwater flows in generally the same direction as that observed at the CERCLA landfill.

And that would mean 5S is not upgradient ... it is downgradient.

Thus our request for two new upgradient wells, out of the area of influence of whatever's going on at the landfill. Those wells would give us a clearer picture of the flow direction.

If this conceptual site model is correct, then the RCRA landfill is acting as an ongoing source. Intra-well testing won't tell us whether there is a ongoing release.

I hope this puts yesterday's conversation in context a bit better.

Give me a call if you have questions about this? Thanks - christy

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